Package 'COVID19'

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Type Package

Title R Interface to COVID-19 Data Hub

Version 2.3.2

Description Download COVID-19 data across governmental sources at national, regional, and city level, as described in Guidotti and Ardia (2020) <doi:10.21105/joss.02376>. Includes the time series of vaccines, tests, cases, deaths, recovered, hospitalizations, intensive therapy, and policy measures by 'Oxford COVID-19 Government Response Tracker' <https://www.bsg.ox.ac.uk/research/research-projects/coronavirus-government-response-tracker>. Provides a seamless integration with 'World Bank Open Data' <https://data.worldbank.org/>, 'Google Mobility Reports' <https://www.google.com/covid19/mobility/>, 'Apple Mobility Reports' <https://covid19.apple.com/mobility>.

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URL https://covid19datahub.io

BugReports https://github.com/covid19datahub/COVID19/issues

Encoding UTF-8

LazyData true

Depends R (>= 3.5.0)

Imports utils, dplyr, tidyr (>= 1.0.0)

Suggests wbstats

RoxygenNote 7.1.0

NeedsCompilation no

Author Emanuele Guidotti [aut, cre] (<https://orcid.org/0000-0002-8961-6623>), David Ardia [ctb] (<https://orcid.org/0000-0003-2823-782X>)

Maintainer Emanuele Guidotti <emanuele.guidotti@unine.ch>

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R topics documented:

`covid19` *COVID-19 Data Hub*

Description

Download COVID-19 data across governmental sources at national, regional, and city level. Includes the time series of vaccines, tests, cases, deaths, recovered, hospitalizations, intensive therapy, and policy measures by Oxford COVID-19 Government Response Tracker. Provides a seamless integration with World Bank Open Data, Google Mobility Reports, Apple Mobility Reports.

Usage

```
covid19(
  country = NULL,
  level = 1,
  start = "2010-01-01",
  end = Sys.Date(),
  raw = TRUE,
  vintage = FALSE,
  verbose = TRUE,
  cache = TRUE,
  wb = NULL,
  gmr = NULL,
  amr = NULL
)
```

Arguments

`country`	vector of country names or ISO codes (alpha-2, alpha-3 or numeric).
`level`	integer. Granularity level. 1: country-level data. 2: state-level data. 3: lower-level data.
`start`	the start date of the period of interest.
`end`	the end date of the period of interest.
`raw`	logical. Skip data cleaning? Default `TRUE`. See details.
`vintage`	logical. Retrieve the snapshot of the dataset that was generated at the `end` date instead of using the latest version. Default `FALSE`.
`verbose`	logical. Print data sources? Default `TRUE`.
`cache`	logical. Memory caching? Significantly improves performance on successive calls. Default `TRUE`.

wb	character vector of World Bank indicator codes. See details.
gmr	url to the Google Mobility Report dataset. See details.
amr	url to the Apple Mobility Report dataset. See details.

Details

If raw=FALSE, the raw data are cleaned by filling missing dates with NA values. This ensures that all locations share the same grid of dates and no single day is skipped. Then, NA values are replaced with the previous non-NA value or 0.

The dataset can be extended with World Bank Open Data via the argument wb, a character vector of indicator codes. The codes can be found by inspecting the corresponding URL. For example, the code of the GDP indicator available at https://data.worldbank.org/indicator/NY.GDP.MKTP.CD is NY.GDP.MKTP.CD. The latest data available between the start and end date are downloaded.

The dataset can be extended with Google Mobility Reports via the argument gmr, the url to the Google CSV file. At the time of writing, the CSV is available here.

The dataset can be extended with Apple Mobility Reports via the argument amr, the url to the Apple CSV file. At the time of writing, the CSV is available here.

Refer to this webpage for more details on the data.

Value

Grouped tibble (data.frame). See the dataset documentation

Note

We have invested a lot of time and effort in creating COVID-19 Data Hub, please:

- cite Guidotti and Ardia (2020) when using COVID-19 Data Hub.
- place the URL https://covid19datahub.io in a footnote to help others find COVID-19 Data Hub.
- you assume full risk for the use of COVID-19 Data Hub. We try our best to guarantee the data quality and consistency and the continuous filling of the Data Hub. However, it is free software and comes with ABSOLUTELY NO WARRANTY. Reliance on COVID-19 Data Hub for medical guidance or use of COVID-19 Data Hub in commerce is strictly prohibited.

Source

https://covid19datahub.io

References

Guidotti, E., Ardia, D., (2020), "COVID-19 Data Hub", Journal of Open Source Software 5(51):2376, doi: 10.21105/joss.02376.

Examples

```
## Not run:

# Worldwide data by country
x <- covid19()

# Worldwide data by state
x <- covid19(level = 2)

# Specific country data by city
x <- covid19(c("Italy","US"), level = 3)

# Merge with World Bank data. It may take some time...
wb <- c("gdp" = "NY.GDP.MKTP.CD", "hosp_beds" = "SH.MED.BEDS.ZS")
x  <- covid19(wb = wb)

# Merge with Google Mobility Reports. It may take some time...
gmr <- "https://www.gstatic.com/covid19/mobility/Global_Mobility_Report.csv"
x   <- covid19(gmr = gmr)

# Merge with Apple Mobility Reports. It may take some time...
amr <- "https://covid19-static.cdn-apple.com/covid19-mobility-data/"
amr <- paste0(amr, "2023HotfixDev26/v3/en-us/applemobilitytrends-2021-01-01.csv")
x   <- covid19(amr = amr)

# Data sources
s <- covid19cite(x)
View(s)

## End(Not run)
```

`covid19cite` *COVID-19 Data Hub Data Sources*

Description

Retrieve citation and metadata of the data sources.

Usage

```
covid19cite(x, verbose = TRUE)
```

Arguments

`x`	dataset returned by `covid19`.
`verbose`	logical. Print citation? Default `TRUE`.

Value

`data.frame` of data sources.

Examples

```
## Not run:

# Download data
x <- covid19("USA")

# Data Sources
s <- covid19cite(x)
View(s)

## End(Not run)
```

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